

REMARKS

The present Amendment is submitted in response to the non-final Office Action that issued March 19, 2009. The non-final Office Action reopened prosecution, setting forth new grounds for rejection.

In the non-final Office Action, claims 1, 2 and 4-8 are rejected under 35 USC §112, first paragraph, as non-enabling. Claims 1, 2, 4-6 and 8 are rejected under 35 USC §112, second paragraph, as indefinite.

Claims 1, 2, 4 and 6-8 are rejected under 35 USC §103(a) as unpatentable over Japanese Patent application Publication No. 2003/050145 to Eshita, et al. (Eshita), in view of US Patent No. 5,390,676 to Katakura (Katakura). Claims 1, 2 and 4-8 are rejected under 35 USC §103(a) as unpatentable over applicant's admitted prior art (AAPA) in view of Eshita and further in view of Katakura.

In response to the objection to the disclosure, applicant has amended the Specification at page 6 as shown above, and respectfully requests withdrawal of the objection.

In response to the objection to claims 1, 4, and 7, applicant has amended those claims substantially in accordance with the Examiner's suggestions, and respectfully requests withdrawal of the objection to claims 1, 4 and 7.

In response to the rejection of claims 1, 2, 4-6 and 8 under 35 USC §112, second paragraph, applicant has amended claim 1, line 5 to read an ultrasonic signal. With respect to claims 2 and 8, applicant has cancelled those claims without prejudice or disclaimer of subject matter. In view of the amendment to

claim 1, and the cancellation of claims 2 and 8, applicant respectfully asserts that claims 1 and 4-6 comply with 35 USC §112, second paragraph, and respectfully requests withdrawal of the rejection to these claims.

In response to the rejection of claims 1, 2 and 4-8 under 35 USC § 112, first paragraph, applicant submits a Replacement Drawing Sheet 4/4 that comprises Fig. 6 after amendment to include the “envelope curve 6 of U/S signal A0, B0,” as well as a revised heading identifying the features of Fig. 6 more accurately. For the Examiner’s convenience, a marked-up copy of the sheet comprising Fig. 6 also is included, to clearly identify what has been changed.

With respect to the term focal point, as used in Figs. 1 and 7, the changes to Fig. 6 and the changes to the specification as shown above should now make clear that the envelope curve 6 of Fig. 6 (as amended) is different than the “focal point T_s ”. That is, T_s is the focal point of the Fig. 6 envelope curve 6, and is shown in Fig. 7. T_s is further defined by the equations identified at page 4, line 13, and page 7, line 29 in the written description. For that matter, these equations are now amended to include a left parenthesis and right parenthesis as shown, to better make clear the distinction between the numerator and denominator, and as such, to render the equations understandable to the skilled artisan.

While the Examiner states that the formula does not provide an indication as to what constitutes the focal point T_s aside from the formula itself, and therefore, that the same equation cannot be used to determine a focal point of ultrasound signals (A0, B0), applicant does not agree. Determining the

coefficients $A(k)$ of A_0, B_0 is believed to be similar to determining the coefficients $A(k)$ of envelope curve 6. Hence, an ability to identify and plug the coefficients $A(k)$ in the equations is all that is required to be able to use them. But possibly more importantly, however, the claims are enabled without need for determining the focal point for the ultrasound signals (A_0, B_0) themselves. And finally, Fig. 7 depicts the focal point T_s of envelope curve 6.

With respect to the Examiner's comments concerning the use of the term envelope curve focal point T_s in his Brief on Appeal, applicant has amended the Specification as it was cited in the Brief on Appeal to now make clear that "envelope curve focal point T_s " is envelope curve focal point T_s , as depicted in Fig. 7.

Hence, in view of the amendments to the specification as set forth above, the amendments to Fig. 6, and applicant's above explanation, claims 1 and 4-7 are believed to now comply with 35 USC §112, first paragraph, and applicant respectfully requests withdrawal of the rejection of those claims thereunder.

With respect to the rejection of claims 1, 2, 4 and 6-8 under section 103(a) over Eshita in view of Katakura, applicant respectfully asserts that independent claims 1 and 7 as amended hereby, and claims 4 and 6 that depend from claim 1, are patentable over Eshita in view of Katakura for at least the following reasons.

That is, applicant does not find that Eshita's paragraph [0026] discloses a receiver unit that determines a time (t_1) of a characteristic value of the ultrasound signal, as asserted by the Examiner.

Eshita's paragraph [0026] merely describes that, after square wave (K) is counted, there is a wait or count of three more waves rising before the received signal is acknowledged. There is no determination of a time (t_1) of a characteristic value, as claimed.

Furthermore, applicant does not find that Eshita at paragraph [0032] discloses a time shift (Δt) of the time (t_1) of a characteristic value relative to the reception time (t_0), or that Eshita uses the time shift (Δt) to determine a correct time value for the reception time (t_0).

Eshita at paragraph [0032] discloses determining a time shift of a "predetermined" time relative to the reception time. It follows that because Eshita does not disclose using time (t_1) of a characteristic value, Eshita cannot be said to use a time shift (Δt) determined through use of time (t_1) of a characteristic value.

Katakura fails to overcome the shortcomings of Eshita. That is, while Katakura discloses a flow meter, he does not disclose a receiver unit that determines a chronological position (T_s) of a focal point of either the ultrasonic signal or its envelope curve as the characteristic value. Katakura's text at col. 3, lines 12-18, describes focusing on a point P, which is a distance L from the array. Katakura's text at col. 3, lines 48-63, describes determining a propagation time, or time of flight from the transmission to focal point P and back.

Nowhere does Katakura mention or reference a chronological position (T_s) of a focal point of either the ultrasonic signal or its envelope curve (6), still less the use of same as the characteristic value, as claimed.

In view of the differences between Katakura and applicant's invention as claimed, the skilled artisan would not have looked to Katakura to overcome the shortcomings of Eshita. That is, the present invention can not be derived from the combination of the references, since any combination would not lead to the invention as claimed. Instead, Katakura would have to be modified, and Eshita would have to be modified to incorporate the modified operation of Katakura.

It is known that in order to arrive at a claimed invention by modifying the references cited art must itself contain a suggestion for such a modification. This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision In re Randol and Redford, 165 USPQ 586, that prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

For that matter, even if the Eshita and/or Katakura could be modified and combined, it is respectfully submitted that neither disclose any hint or suggestion for their combination, and thus it would not have been obvious for one skilled in the art to combine them. This principle is affirmed by the CAFC in In re Fritch, 23 USPQ 2d, 1780, 1784 (Fed. Cir. 1992), which stated that

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious ... "one can not use inside reconstruction to pick and choice among isolated disclosures in the prior art to deprecate the claimed invention"

In view of the above presented remarks and amendments it is believed to be clear that independent claims 1 and 7 patentably distinguish over the art and

should be allowed. As for dependent claims 4 and 6, these claims depend from claim 1 and share the allowable features. Hence, applicant respectfully requests withdrawal of the rejection of claims 1, 4, 6 and 7 under 35 USC §103(a) over Eshita in view of Katakura.

With respect to the rejection of claims 1, 2 and 4-8 under section 103(a) over AAPA in view of Eshita and further in view of Katakura, applicant respectfully asserts that independent claims 1 and 7 as amended hereby, and claims 4, 5 and 6 that depend from claim 1, are patentable over AAPA in view of Eshita and further in view of Katakura for at least the following reasons.

While AAPA does disclose that the receiver unit determines a time (t_1) of a characteristic value of the ultrasonic signal, AAPA does not remedy the shortcomings of Eshita or Katakura, as set forth above. That is, none of AAPA, Eshita and Katakura disclose a time shift (Δt) of the time (t_1) of a characteristic value relative to the reception time (t_0), and using the time shift (Δt) to determine a correct time value for the reception time (t_0), as required by amended independent claims 1 and 7.

None of AAPA, Eshita and Katakura disclose a receiver unit determining a chronological position (T_s) of a focal point of either the ultrasonic signal or its envelope curve as the characteristic value, as required by amended independent claims 1 and 7.

Applicant respectfully asserts, therefore, that independent claims 1 and 7 patentably distinguish over AAPA in view of Eshita and Katakura and should be allowed. As for dependent claims 4-6, these claims depend from amended

independent claim 1 and share the allowable features. Hence, applicant respectfully requests withdrawal of the rejection of claims 1, 4-6 and 7 (the pending claims) under 35 USC §103(a) over AAPA in view of Eshita and Katakura.

Accordingly, the application is believed to be in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application in condition for allowance.

Respectfully Submitted,



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